

Table S1. Contents of major elements (wt.%) in pyroxenes of the Tommot and the Somnitelnyi massifs

Massif	Tommot massif						Somnitelnyi massif						
Rock	jacupi-rangite	feldspar jacupirangite	peridotite	gabbro	essexite	foid-bearing monzonite	granite	granite	granite	albitite	pegmatite		
Mineral	diopside		augite	diopside	augite	aegirine			aegirine-augite		aegirine		
Sample	V8/4	V15/2	O108/11	O95/4	V9/3	V12/9	V29/3	2313/1	PRb4b		RT5	V29/6	
SiO ₂	47.00	47.95	50.06	49.15	53.00	53.28	53.15	52.11	53.18	50.86	50.83	52.02	51.00
TiO ₂	2.69	2.12	2.18	0.49	0.19	0.39	0.73	0.18	0.46	0.26	0.80	0.05	0.26
Al ₂ O ₃	8.87	7.76	7.15	1.01	1.15	2.67	0.35	3.83	2.10	1.98	0.47	0.62	0.46
Cr ₂ O ₃	-	-	0.01	-	-	-	0.06	-	-	-	-	0.04	-
Fe ₂ O ₃	3.68	3.03	-	7.16	-	29.71	29.91	28.47	15.08	14.78	30.66	33.58	33.85
FeO	5.07	5.57	7.83	3.39	13.82	-	2.95	-	5.80	8.59	-	-	-
MnO	0.22	0.36	0.09	0.25	1.11	0.22	0.62	0.18	1.97	2.45	1.23	0.57	0.46
MgO	11.09	11.49	11.96	13.83	10.77	0.19	0.06	0.12	8.01	6.52	0.23	0.03	0.01
CaO	21.82	23.91	21.75	23.65	17.46	0.43	0.50	0.40	2.40	2.25	1.86	0.17	0.38
Na ₂ O	0.68	0.63	0.17	0.03	0.58	13.91	11.84	13.56	7.13	6.94	12.81	13.25	13.22
K ₂ O	-	-	-	0.03	0.08	-	-	-	1.72	2.25	2.37	-	-
F	0.09	0.07	-	-	-	0.12	0.07	0.17	1.39	1.53	0.57	0.07	0.14
Cl	-	-	-	-	0.02	-	-	-	-	-	-	-	-
Σ	101.12	100.72	101.20	98.99	98.16	100.80	100.20	99.02	100.44	98.42	99.46	100.40	99.65
Si	1.742	1.781	1.869	1.869	2.060	1.992	2.059	1.980	2.081	2.047	1.968	1.991	1.968
Al ⁴⁺	0.258	0.219	0.131	0.045	-	0.011	-	0.020	-	-	0.021	0.009	0.021
Al ⁶⁺	0.130	0.121	0.178	-	0.053	0.008	0.016	0.152	0.097	0.094	-	0.019	-
Ti	0.075	0.059	0.060	0.014	0.006	0.110	0.022	0.005	0.014	0.008	0.023	0.001	0.008
Fe ³⁺	0.103	0.085	-	0.205	-	0.836	0.872	0.814	0.444	0.448	0.893	0.967	0.983
Fe ²⁺	0.157	0.173	0.240	0.108	0.449	-	0.096	-	0.19	0.289	-	-	-
Mn	0.007	0.008	0.0033	0.008	0.037	0.0107	0.020	0.006	0.065	0.084	0.040	0.018	0.015
Mg	0.613	0.636	0.653	0.784	0.624	0.011	0.003	0.007	0.467	0.391	0.013	0.002	0.001
Ca	0.867	0.872	0.854	0.964	0.728	0.017	0.021	0.016	0.101	0.097	0.007	0.007	0.016
Na	0.049	0.045	0.012	0.002	0.044	1.009	0.890	1.000	0.541	0.542	0.962	0.984	0.989
Fe/(Fe+Mg)	0.28	0.27	0.26	0.27	0.41	0.98	0.99	0.99	0.49	0.65	0.98	0.99	0.98
P, kbr	14.0	12.3	14.0	11.3	11.3				10	8			
T°C	1133	1141	1182	1148	1131				1022	1011			

Notes: the analyses were performed by L.A. Pavlova and S.P. Roev at IGABM SB RAS using the Camebax-micro x-ray microanalyzer. Calculations T°C and P kb during crystallization of the pyroxenes – by [33].